

EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with **Abraham J. Rosner (registration # 33,276, tel: 202 293-7060) on December 5, 2008** to amend the abstract into one paragraph, to renumber parent Claim 19, to renumber dependent Claims 3-4 and 7-17 and its claim dependency as following:

Abstract

Abstract on page 52 Please connect the second paragraph to be with the first paragraph so that only a single paragraph is applied for abstract.

Claim

Claim 19 please renumber Claim 19 as Claim 2

Art Unit: 1796

Claims 3-4, 7, 10, 11, 13, 14, 15, and 16 please change the claim dependency from “Claim 1 or Claim 19” to “Claim 1 or Claim 2”

Claims 3-4 and 7-17 please renumber Claims 3-4 and 7-17 as Claims 3-15, and also apply the correct claim dependency on Claims 8, 9 and 12.

DETAILED ACTION

2. This office action is in response to **two** things including: (A) **RCE Request** and (B) **Amendment after Final** filed on October 30 and 14, 2008, which is response to Final office actions filed on July 11, 2008. **Claims 1 and 19 are amended; Claims 2, 5-6 and non-elected Claim 18 (Group II) are previously cancelled, while no claim is currently cancelled or added.** To be specific, each of parent **Claims 1 and 19** is amended to narrow down the vinylidene fluoride-based copolymer in terms of its VDF monomer content being in the range of 40-85 mole percent. The support is on pages 5 and 6 of specification.

The use of above Examiner's Amendment is to amend the abstract into one paragraph, to renumber parent Claim 19, to renumber dependent Claims 3-4 and 7-17 and to apply its correct claim dependency. **Claims 1, 3-4, 7-17 and 19** with **two** independent claims (**Claim 1 and Claim 19**) are now pending. An action follows.

Art Unit: 1796

3. 103(a) claim rejections under Final Office Action filed on July 11, 2008 are now removed for the reasons given in paragraphs 4-11 thereafter.

Allowable Subject Matter

4. Claims 1, 3-4, 7-17 and 19 are allowed.

5. The following is an examiner's statement of reasons for allowance: The above Claims 1, 3-4, 7-17 and 19 are allowed over the closest references:

6. The limitation of parent **Claim 1** of the present invention relates to a fluoropolymer composition comprising two components including: a methylene group-containing fluoropolymer (A) and a hydrosilylation catalyst (B),

wherein said methylene group-containing fluoropolymer (A) is capable of hydrosilylation in the presence of said hydrosilylation catalyst (B).

said methylene group-containing fluoropolymer (A) is a vinylidene fluoride-based copolymer having a vinylidene fluoride repeating unit content of not lower than 40 mole percent but not higher than 85 mole percent relative to the total number of moles of the vinylidene fluoride repeating units and the repeating units derived from comonomers in the copolymer,

said hydrosilylation reaction-capable compound (C) is a compound capable of hydrosilylation with said methylene group-containing fluoropolymer (A),

***each of both the main chain termini** in said methylene group-containing fluoropolymer (A) is a **carbon-carbon double bond**, and said **hydrosilylation reaction-capable compound (C)** is a Si-H group-containing compound (C1) having at least two Si-H groups within a molecule thereof.*

Newly-added parent **Claim 19** relates to a fluoropolymer composition of parent Claim 1 and is a combination of limitations from three original Claims 1-2 and 6.

*See other limitations of dependent **Claims 3-4 and 7-17**.*

7. In view of **two** pending parent claims including the twice-amended **Claim 1** and the once-amended previously-added **Claim 19**, the component (A) vinylidene fluoride copolymer is now further narrowed down to use a specific VDF monomer content in the range of **40-85 mole %**. Each of both the main chain termini in said VDF-based fluorocopolymer in parent Claim 1 is a carbon-carbon double bond, while each of both the main chain termini in said VDF-based fluorocopolymer in parent Claim 19 is a Si-H group. In a close examination, some of many Langstein's fluoropolymers indeed contain the content of VDF unit to be within the claimed range. For instance, see Examples 1B and 1C at column 6, lines 5 and 17-18. However, 103(a) rejections relying on the use of Langstein still cannot stand as follows:

8. **The combination of references cannot teach current parent Claim 1:** As exactly pointed out by Applicants on page 8 at middle section of Remarks, there is no disclosure in Langstein of the claimed methylene group-containing fluoropolymer (A) in which both the main

Art Unit: 1796

chain termini is a carbon-carbon double bond. Rather, **the double bonds in the middle of the chain but not at either of the chain termini**. Moreover, there is no disclosure or suggestion in Langstein relating to the effect in connection with a fluoroelastomer having an olefinic double bond at a chain terminus. Therefore, even in the case that the fluoroelastomer of Langstein is used in making the composition of Carter ' 566, Carter' 136 and EP ' 088, the resulting combination would not achieve the invention of Claim 1 **since at least some extra double bonds are existed in the middle of polymer chain**. It is a fact that such extra double bonds will at least somewhat react in the course of running hydrosilylation reaction.

9. **The combination of references cannot teach current parent Claim 19** since the same rationale discussed above can be again applied to parent Claim 19. In order to be further distinguished from prior art, Applicants have specifically shown in Declaration filed on April 30, 2008 that reproduction of Langstein's fluoroelastomer does not maintain a sheet formed upon immersion in acetone solvent. It may be due to the lack of curing site such as carbon-carbon double bond or Si-H at polymer chain termini.

10. After further examination and search, the examiner found the following prior art did not teach the claimed limitation:

US 4,314,043 to Kojima et al. only discloses the preparation of crosslinked fluorine-containing grafted elastomer by the use of amine crosslinking agent or the like (column 8, line

Art Unit: 1796

11-45). Hydrosilylation type reaction is NOT used. Additionally, the claimed vinylidene fluoride copolymers with specific functional groups on each of both polymer chain termini in parent Claim 1 and Claim 19 are not disclosed or suggested. Therefore, Kojima fails to teach or fairly suggest the fluoropolymer composition of present application.

11. The key issue on making the claimed vinylidene fluoride copolymers with specific functional groups on each of both polymer chain termini in parent Claim 1 and Claim 19 are not disclosed or suggested by prior references in combination or alone in the course of using hydrosilylation reaction as curing method. Additionally, the motivation to link is lacking. Therefore, the present invention is novel.

12. As of the date of this office action, the examiner has not located or identified any reference that can be used singularly or in combination with another reference including the above references to render the present invention anticipated or obvious to one of the ordinary skill in the art. Therefore, the independent and parent **Claims 1 and 19** are allowed for the reason listed above. Since the prior art of record fails to teach the present invention, the remaining pending dependent **Claims 3-4 and 7-17** are passed to issue.

13. Any inquiry concerning this communication or earlier communication from the examiner should be directed to **Dr. Henry S. Hu whose telephone number is (571) 272-1103**. The examiner can be reached on Monday through Friday from 9:00 AM –5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dr. Vasu Jagannathan, can be reached on (571) 272-1119. The **fax** number for the organization where this application or proceeding is assigned is **(571) 273-8300** for all regular communications.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Peter D. Mulcahy/
Primary Examiner, Art Unit 1796

/Henry S. Hu/
Examiner, Art Unit 1796

December 5, 2008